

Revision: 1.0

Date: 2-1-18

1 | Page

Release Notes DT820C (ITY-8LCG)

Date	Version	Notes	Author
2-1-18	1.0	Original Notification	EA



Table of Contents

Application.....	3
Overview	3
Line Up	4
Software Licensing (Pre-existing on DT820)	4
Hardware Accessories.....	4
Compatibility.....	4
Switch compatibility	4
Peripheral Applications/Administration Tools	5
Specification	6
Firmware.....	6
Hardware Specification.....	6
Feature Specification	6
Software Specification	7
Call Functions	8
Phone Book Call History Function.....	11
XML Browser Function	12
Display	12
Network Function.....	13
License Management	15
Maintenance Function	15
Network Management Function	16
Added Functions:	17
Bug Fixes:	17
Limitations:	17

Application

This Release note applies to the DT820 Color Gigabit terminal that can be connected to the NEC voice server.

Overview

The DT820C IP desktop self-labeling phone is a cost effective terminal end-point for standard business users as well as a great choice for use in building lobbies, public spaces and contacts centers. The 8 button self-labeling phone can be upgraded to 32 line buttons making it ideal for almost any work environment. The Built in Gigabit support with the color display and power is supplied to the DT820C phone via PoE (Power over Ethernet).

The DT820 Color phone interfaces are designed to improve the overall user experience while remaining intuitive- with no extensive training needed. At-a-glance notifications include new voice messages, missed calls and telephone user's current presence status.

Line Up

Part #	Model Name	Line Button	Display	Description
BE117839	ITY-8LCGX-1(BK) TEL	8	Color	8 button color display Self-labeling terminal with built in GIG support <i>(no licenses required for GIG option)</i>

Software Licensing (Pre-existing on DT820)

Part #	Name	Description
BE115939	DT820 Extended Line key16 LIC	8 Button software line add-on for ITY-8LCGX. Increasing the capability of the terminal to 16 line buttons.
BE115940	DT820 Extended Line key32 LIC	24 Button software line add-on for ITY-8CGX. Increasing the capability of the terminal to 32 line buttons.

Hardware Accessories

Part #	Model Name	Description
BE115598	HANDSET(NARROW)-Y(BK) UNIT	Standard DT820 telephone replacement handset
BE115599	HANDSET CORD(12FT)-Y(BK)	Standard Coil cord for the DT820 Telephone
BE110790	IP4WW-Wal Mount Unit	Optional wall mount unit for the DT820 Telephone. DT820 telephone comes with a built in wall mount
Q24-FR000000107294	ITY PTT Handset (BK)	Push to talk Handset Black handset for DT820 Telephone
Q24-FR000000107295	ITY PTM Handset (BK)	Push to Mute Handset Black Handset for DT820 Telephone

Compatibility

Switch compatibility

System	Version	Note
SV9100	R1 or later	*1
SV9300	V1 or later	*1
SV9500	V1 or later	*1
SV8100	R9 or earlier	*2
SV8300	R9 or earlier	*2
SV8500	S8 or earlier	*2
3C	Not Supported.	TARGET (Subject to change without notice): UNIVERGE 3C will be supported in FY18 2H.
SIP@Net	Not supported.	TARGET (Subject to change without notice): SIP@Net will be supported in FY18 2H.
SL1100	Not supported.	
SL2100	Not supported.	

*1: If PBX/KTS doesn't support ITY-8LCGX, phone works as ITZ-8LDG. It means the center download is not available. Center download is when the NEC voice server is able control the firmware download process to the phone.

*2: Phone works as retro (DT710) mode. Center download function not available.

Peripheral Applications/Administration Tools

The following is a compatibility of the additional tools that can be configured for operational on the DT820CG. Reference the user manuals and configuration guides for these applications/tools for additional details.

#	Application	Description	Version	Posting Location
1	IP Phone Manager	Web Programming tool used for the administration and provisioning of NEC terminals	8.5.0 or higher	NEC Anytime Knowledge base section and on the NTAC software downloads
2	DT800 Series Data Maintenance Tool	User web programming tool for configuring ring tones, telephone directory, wallpaper, storing backup data	4.2.0.0 or higher	NEC Anytime within the Knowledge base section and the NTAC software downloads
3	Instant Access Application	An updated UI for a DT user providing a portal access to links such as news , weather, calendar, etc.	N/A	Configured via the terminal programming. Quick installation material posted on NEC Anytime.

Specification

Firmware

The Announced Firmware providing the full functionality noted within this release note is:

➤ **Version 3.2.0.0**

Firmware is preinstalled on the DT820CG; however, if you should require the firmware it can be downloaded from NEC Anytime Knowledgebase section or the NTAC software download section.

Hardware Specification

Item	DT820C:ITY-8LCGX
LCD Type	Color
Resolution	320 x 240 dot
Size(mm)	3.5 inch: 76.9(W) × 63.9(H)
LCD Backlight	Yes (White color)
Incoming Lamp	3 colors (Red, Green, Yellow)
Line Key	8 buttons with LED (Red, Green)
Scroll button	1
Soft Key	6 buttons (Exit, Help and 4 buttons)
Fixed Function Key	13 (4 cursor, Enter, Hold, Transfer, Speaker, Recall, Feature, Answer, Mic, Menu)
10 Key	12 (0~9, *, #)
Handset	Narrowband, supporting HAC Band: 300 ~3400Hz Curl Cord Length: 12 Feet
Hands free	Full Duplex (narrowband)
Headset	Wired Headset (Recommended Model: Supraplus HW 251N (Plantronics)) Wireless Headset (Recommended SAVI W710 (Plantronics))
External Interface	LAN Connector : 2 ports, Handset Modular : 1 port, Headset Modular : 1 port
Consumed Power	IEEE802.3at Type1 Class1 (Less than 3.84W)
Power Feeding	PoE : IEEE802.3at Type1 (up to 3.84W)
LAN I/F	10BASE-T (IEEE802.3i) 100BASE-TX (IEEE802.3u) 1000BASE-T(IEEE802.3ab)
USB I/F	-
Option	Wall Mount Unit
Tilt Angle	2 stage (25 and 38 deg)
AC Adapter	No
Dimension (mm)	178 x 221 x 133
Weight (kg)	1.0

Feature Specification

Item	Description	DT820C: ITY-8LCGX
Menu	Local Menu	User Setting and configuration
	Short Cut Menu	Short cut to menu on Desktop Icon

Item		Description	DT820C: ITY-8LCGX
XML Browser	Contents	Access to an external server and display	Yes
	Pop-up	Display info from system over XML display	Yes
	Push	Application from an external server	Yes
Phone Book	Local phone book	Store in terminal side	Yes
	System phone book	Store in system side	Yes
Call History	Local call history	Store in terminal side	Yes
	System call history	Store in system side	Yes
System Info Display (Home screen)	Desktop icon	Display a terminal status	Yes
	4 line Display		Yes
	Volume		Yes
	Soft key frame	Frame around Soft key	Yes
	Double height size		Yes
Multi Window		Display multi XML app with switching	Yes
Screen Saver		Change display in a cycle manner	Yes
Security Lock		Lock display to avoid invalid operation	No
Status Display			Yes
Wallpaper		Display a wallpaper on Home screen	Yes

Software Specification

Heading		Explanation	Category
Telephone function	Call control protocol	NEC i/N SIP Expansion SIP for multi-function telephone	—
		RTP/RTCP RTP(Call sound, Recording media)/RTCP(only Recording)	—
	CODEC Support CODEC	Narrow band – 3.1kHz audio bandwidth : G.711,G.729a	—
	QoS Voice quality improvement, QoS	Acoustic echo canceller	—
		Adaptive jitter buffer	—
		Packet loss concealment (G.711 Appendix I)	—
		IEEE802.1p priority	—
		ToS value (IP Precedence, Diffserve (DSCP))	—
Network function	Basic protocol	TCP/IP(IPv4, TCP, UDP)	—
		TFTP(RFC-1350),FTP(RFC-959), HTTP(RFC-2616), HTTPS(RFC-2818), DNS(RFC-1034/1035), ARP(RFC-826)	—
	Plug & Play	DHCP(RFC-2131 compatible)	—
		DHCP (Vendor Extensions)(RFC-2132 compatible)	—
		Auto Config (NEC proprietary)	—
		LLDP(IEEE802.1AB), LLDP-MED(ANSI/TIA-1057-2006)	—
	Authentication protocol	IEEE802.1X Supplicant (EAP(RFC-3748))	EAP-MD5
			EAP-TLS
		EAPOL Forwarding (for PC port's supplicant)	—
		PC Port Link Watch (for PC port's supplicant)	—
	LAN I/F LAN I/F setting	Speed (Auto,100M, 10M) Duplex (Auto, Full, Half) Auto-MDI/MDX	—

		Tag VLAN (IEEE802.1Q) Port VLAN (PC port Only)	—
	NAT Support NAT	Static NAPT support	—
	VPN	L2TP/IPsec (IPv4)	—
	Security	Authentication (Call control, XML browser)	—
		Encryption (Call control, Voice, Web programing, Download)	—
	Management function	QoS (NEC), SIP (Failure information notice (NEC original), and QoS (NEC original).	-
		LLDP (QoS)	—
Maintenance function	Terminal configuration	Handset programing	—
		Web programing	—
		IP Phone Manager (Windows)	—
		IP Phone Manager (Maintenance tool -- Windows application)	—
	F/W Update	Manual update.	—
		Center (*) / Automatic update.	—

(*): It is only enabled if PBX/KTS supported this feature for DT820 Color.

Call Functions

This section describes the function of the IP multifunction telephone connected to the NEC server. The contents described in this chapter are terminal specific specifications, and there are functions restricted by the presence or absence of support on the system side.

#	Function	Item	Note
1	Call	Different kinds of calls	The following call is possible. <ul style="list-style-type: none"> • Handset call. • Headset call (wired, wireless) • Hands free call. • Group listening. • Paging (an unicast / a multicast is supported) • BGM (an unicast / a multicast is supported)
2		Monitor function	It corresponds to following call monitor function by multi-session control. <ul style="list-style-type: none"> • Silent monitor
3		Support CODEC	Narrow band –3.1kHz voice bandwidth <ul style="list-style-type: none"> • G.711、G.729a
4		Server Recording	RTP data is sent to recording server on the network (choice of static or dynamic).
5	Voice quality improvement	Echo canceler.	Acoustic echo canceler.
6		Jitter control, PLC	Cutting prevention of the tone by the jitter of a packet by a jitter buffer (The min value setting by system control is possible.) <ul style="list-style-type: none"> • Voice quality improvement by the sound interpolation which is at the time of packet loss by PLC (Packet Loss Concealment) (G.711 Appendix I)
7		QoS control	Priority control of IEEE802.1p and ToS value (IP Precedence and Diffserve (DSCP)) etc.

#	Function	Item	Note
8	Display	LCD indication	<p>It corresponds to the following multi-lingual.</p> <p>① Dterm character mode. ② Shift JIS mode (Japanese character) ③ Russia & Turkish mode.</p> <ul style="list-style-type: none"> Support double height character. It corresponds to a flash /a reverse /a reversed flash. Without undergoing influence of a network load in the local call time display function and the local clock indication function, stable time check and time display are possible. It's possible to show the name which is name display feature and is registered with a telephone built-in telephone book to an arrival/transmissions the time. (The multilingual correspondence is also possible by download font.)
9		Self-labeling function	<ul style="list-style-type: none"> The Self Labeling button function is offered. 8 button (8button x 1 screen) 2 screens and 4 screens can expand by a license.
10		LCD backlit control	<ul style="list-style-type: none"> LCD backlight can be set as 4 steps. A LCD backlight lights up in the time of activating buttons, an arrival the time and call start.
11		Turn off display	When not operating a telephone during fixation time, it's possible to turn off LCD.
12		LED indication	<p>The lighting up pattern can be established by setting within the NEC Voice server.</p> <ul style="list-style-type: none"> 15 kinds (always On/off is included.) LED brightness is cut by half. LED brightness is cut by half and electric power consumption is restrained.
13	Activating buttons	Button, Hook switch	<ul style="list-style-type: none"> 10 KEY Notify of Hook switch, Line button, Soft Key, fixed function button, 10Key push down information. Piano touch correspondence of 10KEY (until 2 point simultaneous detection)
14	Tone generation	Call Progress tone. Short tone	<ul style="list-style-type: none"> Call Progress tone of each country specification Programmable call Progress tone (the download tone) Set the tone specification as the initialization time from NEC Voice server and without F/W change in the terminal, is applicable to the worldwide tone specification <ul style="list-style-type: none"> ➢ Frequency (same time at most 2 frequencies.) ➢ ON-OFF pattern [ms]
15		DTMF tone	<ul style="list-style-type: none"> The DTMF tone (at the time of RFC2833 telephony event reception) can rumble at the time of an extension call. Outband (RFC2833) It corresponds to an Inband transmission as well as a (Outband RFC2833) transmission.
16		Key touch tone.	It's possible that the single tone of the 1kHz or No tone chooses.
17		Download of the voice key touch tone.	It's possible to download audio data of voice key touch tone from LAN.
18	Ring	Ringtone rumbling	Tone ringtone, Download ringtone support

#	Function	Item	Note
19		Ringtone ringing separation (MW LED flash, connected)	※ It's possible to set the color of the MW LED as a ringtone different depending on an outside line, an extension and a caller ID (a local telephone book, connected).
20		Download Ring	It's possible to download a ringtone file from LAN. <ul style="list-style-type: none"> • 8kHz 8bit u-law : 32sec(max) • 16kHz16bit Linear PCM : 32sec(max)
21	Hold music	Hold on music	It's possible to use holding music in the telephone.
22		Download of hold on music.	It's possible to download 1 of favorite hold on music.
23	Volume	Volume control.	It's possible to adjust the following volume by a volume key operation. The more appropriate volume is chosen automatically in the terminal state. LCD contrast Handset / Hands free volume Ring volume BGM volume
24		Other gain adjustments.	It's possible to adjust the following gain by system control. <ul style="list-style-type: none"> • Side tone volume. • Key touch tone volume. • Off hook ring volume.
25	Emergency call.	Terminal location information.	LLDP and E911 are supported.

Phone Book Call History Function

#	Function	Item	Note
1	Phone book Registration	Number	A registration of max 500 items is possible.
2		Registration breakdown	<ul style="list-style-type: none"> - Registration is possible by the user's hand input. - Block registration is possible by download from a server. The registration contents 1 per case are the name (kanji and the 'kana'), 4 telephone numbers, a company name, a category name (6 kinds), a group number, a ringtone kind, a LED flash classification and the memory number.
3		Grouping.	It's possible to group phone book data and manage. (Max 20 groups.)
4	Phone book Search	Name search	A search is possible by a name.
5		Telephone number search	A search is possible by a telephone number.
6		Group search	A search is possible by a phone number.
7	Phone book edit	Edit	It's possible to edit registered name (kanji and the "kana"), 4 telephone numbers, a company name, a category name, a group number, a ringtone kind and a LED flash classification.
8		Erase	Able to erase 1 item or all items.
9	Phone book data Exchange	Reading	A phone book data is read from connected PC, PDA and cellular phone using LAN.
10		Writing	A phone book data is extracted to connected PC, PDA and cellular phone using LAN. It depends on the specification of the connection destination for how extracted data is treated.
11	Outgoing call history	Preservation number	Storage of up to 50 outgoing call history. History is deleted automatically upon the 51 call stored (last one stored first one erased)
12		Preservation element	A time (month/day/hour/minute) of an outgoing call and the telephone number are memorized.
13		Indication	When number registered within the phone book, beforehand, the outgoing call number indicates its name. When number is not identified in phone book, the number is stored. When the same number is registered, it gives priority to a most recent number.
14		Registration	They're able to register an outgoing call history data in the phone book.
15		Erasure	1 or all items erases the data of the outgoing call history.
16	Incoming call history	Preservation number	The storage of the incoming call history is set to 50 items by an answer call and a no-answer call total.
17		Preservation element	A time(month/day/hour/minute) of an incoming call, the telephone number and the result(answer/no-answer call)
18		Indication	When agreeing with the number registered with a phone book beforehand, the incoming call number indicates its name. When number is not identified in phone book, the number is stored. When caller ID is not provided, "non-notice number" is indicated.
19		Registration	Able to register an incoming call history data in the phone book.
20		Erasure	1 or all items erases the data of the incoming call history.

#	Function	Item	Note
21	Multi language	Multi language	The character besides the standard font set is made a used language by the font download function. (The present correspondence language: Korean (the Hangul alphabet character)) Character representation of application of a phone book and the outgoing/incoming call history is chosen as using a linguistic table and correspondence of multi languages is enabled. (It's possible to include an additional language table by file download from LAN.). But, the language conversion it itself chooses as a language table doesn't do the data registered with a phone book application.
22	Backup	Backup	A phone book and outgoing/incoming data can save a backup data to connected PC using LAN.
23		Restoration	A phone book and outgoing/incoming data can restore a backup data from connected PC using LAN.

Note: The Phone book and outgoing/incoming call history can be enabled/disabled by the NEC voice server.

XML Browser Function

#	Function	Item	Note
1	XML browser	Text and Image	It's possible to indicate XML contents (including a corporate phone book) variously.
2		Chime and Big LED flash	It's possible to flash a chime and a big LED using XML contents (including designation in Push).
3		Push function	When an event occurred on the server side, they're able to notify of information immediately.
4		RTP streaming	It's possible to play a RTP packet using XML contents (a tag for RTP streaming).
5	SDK	Provide SDK	SDK which supported to the Push function provide.
6	Multi Language	Multi language.	XML When accessing the external XML server, indication of contents doesn't do a language conversion by a language table.

Display

#	Function	Item	Note
1	Desktop	Desktop icon.	The desktop icon which indicates the state variously is indicated.
2		Wallpaper	Wallpaper can be shown
3		Custom color font	The color of the font shown to PBX/KTS screen can be chosen from 16 colors.
4		Home frame	A netlike frame can display on the wallpaper of PBX/KTS screen.

#	Function	Item	Note
5	Local Software	The LCD indication ability.	<ul style="list-style-type: none"> The character of 4 lines can be indicated at most 28 digits. Multi-lingual of Western Europe language, Russian and Turkish is supported with a font set variously. 2 font size (16 dots, 12 dots). Proportional font indication.
6		Menu/Application switching.	It's possible to use all kinds' function by the menu. It's possible to switch the applications. <ul style="list-style-type: none"> It's possible to control a pop-up of PBX/KTS screen.
7		Screen saver	A screen saver can be indicated.
8		Short cut menu	It's possible to indicate a status of a no-answer call and a voice mail, using the icon.
9	LCD Backlit	LCD backlit control	<ul style="list-style-type: none"> LCD backlight can be set as 4 steps. A LCD backlight lights up in the time of activating buttons, an arrival the time and call start. I have to operate fixation time (system setting), a LCD backlight goes out.
10		Turn off display	When not operating a telephone during fixation time, it's possible to turn off LCD.
11	10 KEY Backlit	10 KEY Backlit	Non-support

Network Function

#	Function	Item	Note
1	Basic Network Setting	LAN Interface setting.	The following setting is possible every LAN Port and PC Port. <ul style="list-style-type: none"> LAN Speed & Duplex Auto-MDI/MDIX (When Speed and Duplex are Auto.)
2		Tag VLAN setting.	The following setting is possible. <ul style="list-style-type: none"> Tag VLAN ID 802.1p priority
3		IP network setting.	The following setting is possible. <ul style="list-style-type: none"> IP Address Subnet Mask Default Gateway (Default Router)
4		Call Control protocol setting.	The following setting is possible. <ul style="list-style-type: none"> SIP Server Address(IP/URL) SIP Server Port
5	Automatic Setting	LLDP (IEEE 802.1AB Compatible) LLDP-MED (ANSI/TIA-1057-2006)	It's possible to set ToS value and VLAN ID/Priority by LLDP. It's possible to notify a host system of ELIN (location information).
6		DHCP (RFC-2131 Compatible)	IP Address can be set automatically by DHCP. Using Request List, the following item is also automatic setting possible. <ul style="list-style-type: none"> Subnet Mask Default Gateway (Default Router)

#	Function	Item	Note
7		DHCP (RFC-3361 Compatible)	SIP Server Address (IP/URL) can be set automatically by DHCP.
8		DHCP (Vendor Extensions) (RFC-2132 Compatible)	Network setting of this IP telephone can be acquired automatically using the vendor class ID. (A vendor class of all options is supported.) <ul style="list-style-type: none"> • SIP Server Port • SIP Server Address (IP/URL) • Auto Config file name • Auto Config Download protocol • Auto Config Server IP Address
9		DHCP-VLAN	Establish VLAN feature effective and VLAN ID automatically by the VLAN ID distributed from DHCP server.
10		Auto Config	Configuration information is downloaded from a FTP server by option notice of a DHCP server, and it's possible to compose network setting automatically and use.
11	Port VLAN	PC Port VLAN	The function by which mappings set the PC connected to PC Port to 1 of virtual VLAN on the LAN Port side. (The VLAN ID designated as a packet in a PC port is added and it's forwarded to LAN Port. VLAN Tag is eliminated, and a packet with the VLAN ID designated from LAN Port is forwarded to PC Port.)
12		PC Port VLAN setting.	The following setting is possible. <ul style="list-style-type: none"> • Tag VLAN ID • 802.1p priority
13	NAT	Simple NAT	The communication which is via a static NAT router is supported. Without the external equipment for SIP - ALG, a solution across simple NAT is offered.
14		Simple NAT setting.	The following setting is possible. <ul style="list-style-type: none"> • WAN Mate Address (IP/URL) • WAN SIP Mate Port • WAN Self IP Address
15	VPN	IPv4	L2TP/IPsec
16	Network Authentication	802.1X (Supplicant support)	The following authentication protocol can be used. <ul style="list-style-type: none"> • EAP-MD5 • EAP-TLS
17		EAPOL Forwarding	Network authentication of 802.1X is also available the PC connected to PC Port. (Connected switching HUB needs Authenticator which can certify more than one hosts.)
18		PC Port Link Watch	When Link with a connected PC curved to a PC port, a logoff message is transmitted to the switch of the dominance to keep security.
19	Security	Authentication	It's possible to use the authentication function at the time of the following all server connections. <ul style="list-style-type: none"> • Call Control protocol (SIP) • Download protocol (FTP) • Protocol for web programmings (HTTP and HTTPS)

#	Function	Item	Note
20		Encryption.	It's possible to use encryption by the following protocol. <ul style="list-style-type: none"> • Call control protocol (SIP) • Voice media (sRTP)

License Management

#	Function	Item	Note
1	License	Gigabit Ethernet license	Non-support: Included on the Phone as standard configuration.
2		Line key license	It's possible to expand a linear key in 16 lines and 32 lines.

Maintenance Function

#	Function	Item	Note
1	Terminal configuration	Hand set programing	Configuration is possible by terminal.
2		Web programing	Configuration is possible from a browser of a PC.
3		Config download	Terminal configuration is possible to download the config file (designation of the change item, possible) made by a maintenance tool (Config Setup Tool of IP Phone Manager bundling).
4	QoS Management	QoS Information notifying	It's possible to notify of the following QoS information by SIP protocol expansion. <ul style="list-style-type: none"> • The call starting/closing time • Call partner IP address • The number of the transmission/reception packet • The number of reception packet losses • RTP alarm rumbling occurrence presence
5	Failure Management	Failure information notifying/acquiring	It's possible to notify of the following failure information by SIP protocol expansion. <ul style="list-style-type: none"> • Reset factor • The reset time A maintenance tool (IP Phone Manager) can acquire failure information.
6		Loopback test	A loopback test of a sound pass of media is possible by directions of PBX/KTS.
7	F/W Download	Manual download (from terminal)	Telephone operation and browser interface operation of a PC can download F/W.
8		Lumping download to more than one terminal by a maintenance tool	A maintenance tool (IP Phone Manager) can download F/W.
9		Center download	Directions of PBX/KTS can download terminal F/W. (Directions from PC Pro, When connecting to PBX/KTS, it's downloaded automatically, Designation in the start time) <ul style="list-style-type: none"> • It is only enabled if PBX/KTS supported this feature for DT820 Color.
10	Maintenance	Maintenance via a network	Maintenance via a network is possible by a web programming and IP Phone Manager.

Network Management Function

#	Function	Item	Note
1	Support Protocol	SIP	It's possible to notify of QoS information and failure information, etc. by SIP protocol expansion.
2	QoS Management	QoS Information notifying	Notify of QoS information by SIP Protocol expansion.
3	Failure Management	Failure information notifying	It's possible to notify of failure information by SIP protocol expansion.

Added Functions:

N/A

Bug Fixes:

N/A

Limitations:

N/A