

Data Communication Products section 5

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Features

High-Speed HF Modem	Fax, Image and E-mail System
Embedded & Standalone Systems	Automatic Message Relay
Network Management Software Packages	Adaptive, ARQ Protocols
Point-to-Point and Complex Network Configurations	

Introduction

Data communication is rapidly becoming a major user requirement in a significant number of world markets. Datron addresses customer data communication needs with a proactive systems approach that offers cost-effective, easy to implement, and technically responsive solutions. The E110A MIL-STD-188-110B HF modem with DatronLINK-2 or DatronLINK HF Email and Network Management Software provides a complete data communications package with data rates up to 9600 bps. The DatronLINK software provides Email, FAX, file transfer and keyboard chat features for HF radio and allows the user to create and manage complex radio data networks. The E110A modem with DatronLINK software is specifically designed for use with the 7000-series radios. The E110A can be installed in any standard desktop PC and is included in Datron's DT110A rugged notebook computer. Datron's RT7700 HF radio includes an internal MIL-STD-188-110B that works in conjunction with DatronLINK-2 software. The equipment can be located on a desktop, rack-mounted or shock mounted in vehicles.

MIL-STD-188-110B Modem

1. E110A

High-speed HF modem utilizing MIL-STD-188-110B compliant waveforms to provide reliable, fast, and accurate data transmission up to 9600 bps. The E110A, in conjunction with DatronLINK-2 software, incorporates ARQ (Automatic Repeat Request) and FEC (Forward Error Correction) protocols to ensure error free data communications. It also incorporates an adaptive data rate protocol and will throttle up and down in speed based upon the conditions of the channel to ensure the message will get through when the channel conditions are degraded. The modem consists of a ¾ size PCI card for use in a desktop computer.

The E110A modem can be used with the basic software that is provided with the modem or with Datron's proprietary DatronLINK or DatronLINK-2 HF Email and Network Management Software. The basic software application provides the ability to exchange E-mail and chat messages and transfer files. Datron's proprietary software applications provide superior messaging, radio programming and network management capability. See the DatronLINK and DatronLINK-2 sections below for more information.

For the RT7000, order cable C992369 (RT7000 to modem) and cable C992370 (computer to modem). For the TW7000, order cable C992370 and cable C992377 (TW7000 to modem). Additionally, the radio must have the 7000WB1 wideband filter option. If DatronLINK is ordered, then order 7000ALE or 7000ALE-141B. DatronLINK-2 can be used with or without ALE (Automatic Link Establishment).

Rugged Tactical Notebook Computer

1. DT9400

Rugged notebook computer designed for applications that require superior performance, quality and durability. The DT9400 offers the processing power, video display, and necessary accessories to meet the demanding requirements encountered in the field. The terminal can operate from either ac or dc input primary power or its internal battery pack. It is constructed of a strong magnesium alloy that is NEMA rated and is able to meet the environmental requirements of MIL-STD-810 for operation in harsh environments. The DT9400 offers the following standard minimum features*:

- Intel Core 2 Duo L7400 1.5 GHz processor
- 667 MHz FSB
- 14.1" XGA (1024 x 768) TFT sunlight readable LCD Display
- 2 GB DDR RAM (upgradeable to 4 GB)
- SATA 160GB shock resistant hard drive
- Dual DVDRW Drive
- Windows XP Pro Operating System with multuser interface
- 128MB shared video RAM
- 2 MB level 2 cache memory
- Internal 56K Modem



- Internal 10/100/1000 Base-T Ethernet LAN card
- Sealed magnesium alloy case
- One IEEE 1394b Firewire
- One serial RS232 port
- Two high speed USB 2.0 ports
- One VGA port
- One docking port, 120 pin
- One PCI audio MIC-in and Line-out port
- 100-204 VAC auto-sensing adapter
- Internal rechargeable Li-Ion battery pack
- Two type II PCMCIA card slots
- Built in waterproof speaker

Additional options are available for the DT9400 including 802-11b/g wireless LAN, GPS, expansion chassis with PCI bus, touchscreen display, shock mount, battery charger, etc. Please contact your Datron Sales Representative for information regarding the numerous configuration options.

*Specifications subject to change without notice. In most cases, capabilities will increase in conjunction with technology.

Rugged Tactical Notebook Computer for Data Communication

1. DT110

DT110

Rugged DT9400 notebook computer with MIL-STD-188-110B E110A modem housed in an integrated expansion chassis and DatronLINK HF Email and Network Management Software. The DT110 is designed for a variety of military and tactical uses as a complete HF message terminal in harsh environments. It combines the versatility of Datron's rugged DT9400 notebook computer with the functionality of the E110A modem in a single package. See the DT9400, E110A, and DatronLINK sections for more information.

The DT110 offers the processing power, video display, and durability required of a field-deployable computer terminal. The terminal can operate from either AC and DC input primary power or its internal battery pack. It is constructed of a strong magnesium alloy that is NEMA rated and is able to meet the environmental requirements of MIL-STD-810 for operation in harsh environments. See the DatronLINK section below.

For use with the RT7000, order cables C992369 (RT7000 to modem) and C992370 (computer to modem) separately. For use with the TW7000, order cables C992370 (computer to modem) and C9923777 (TW7000 to modem) separately. Additionally, the 7000-series radio must have the 7000WB1 wideband filter option and the 7000ALE-141B ALE option.

Software Applications for Data Communication

A line of software applications for point-to-point data transfer, network configuration and control, and transceiver setup and control are offered.

1. DatronLINK-2
2. DatronLINK
3. RC2-NG

The application is available in three versions. DatronLINK Remote allows sending and receiving E-mail, files, and keyboard chat messages over the radio network. E-mails can be sent over the internet by first sending the E-mail to another station that has the DatronLINK Gateway software installed. DatronLINK Gateway extends the features of the Mail Remote station by providing E-mail service to and from the internet. DatronLINK FAX Gateway extends the features of the Mail Gateway station by providing the ability to exchange Fax images with a FAX machine on the telephone network. In addition, a FAX Client is available for the Remote stations to capture FAX images from a TWAIN scanner and send those images to the FAX Gateway station.

DatronLINK-2

DatronLINK-2 is the successor to Datron's highly popular DatronLINK HF Email and Network Management software. It includes all of the functionality of DatronLINK with additional features. The application provides the ability to exchange E-mail, faxes, files and keyboard chat messages, and allows the user to configure and manage the radio network. Automatic message relaying and alternate path selection, transparent to the user, help ensure that messages get through reliably.

Additional features include ARQ chat, which is significantly faster than AMD chat, fixed frequency operation, and a tactical mode of operation. Fixed frequency operation provides the ability to transfer files and exchange ARQ chat messages without ALE on a pre-assigned channel. The tactical mode of operation allows the user to stop a file transfer in mid-stream and switch to voice operation. When the voice operation is completed, the file transfer resumes from the point it left off.

DatronLINK-2 is the central control point of a radio-messaging network. It provides a fast and easy way to program the radio with ALE parameters (frequencies, call signs, scan groups, sounding, etc.) and works in conjunction with ALE to selectively and automatically link with another station using the best available channel. Additionally, it incorporates ARQ (Automatic Repeat Request) and FEC (Forward Error Correction) protocols to ensure error-free data communications up to 9600 bps with the E110A modem and up to 19,200 bps in 2-ISB mode with the RT7700's MIL-STD-188-110B internal modem.

DatronLINK-2 can be used with Microsoft Outlook, Outlook Express and other POP/SMTP email clients. It runs on Microsoft Windows XP, Service Pack 3 or higher, and is supplied with a USB HASP security key. It can be used with or without ALE (fixed frequency operation only). Order part number DatronLINK-2.

When used with the RT7700 radio with internal modem, it operates seamlessly with the Virtual Remote Control Unit (VRCU) software and connects either directly to the radio or can be interfaced remotely over the internet. A LAN port is required on the computer. Order cable C992258 separately. If ALE is required, then order 7700R-ALE separately.

When used with a 7000-series radio and E110A modem, the 7000WB1 option is required. If ALE is required, then order 7000ALE or 7000ALE-141B separately. A serial port is required on the computer. For the RT7000, order cables C992369 and C992370 separately. For the TW7000, order cables C992370 and C992377 separately.

For compatibility with existing DatronLINK stations, the existing station must have its operating system upgraded to Microsoft Windows XP, Service Pack 3 or higher, and DatronLINK must be replaced by DatronLINK-2.

DatronLINK

DatronLINK is a powerful HF Email and Network Management Software application that provides a gateway between the HF radio network and the Intranet/Internet. The application provides the ability to exchange E-mail, faxes, files, and keyboard chat messages, and allows the user to configure and manage the radio network. Automatic message relaying and alternate path selection, transparent to the user, help ensure that messages get through reliably.

DatronLINK is the central control point of a radio-messaging network. It provides a fast and easy way to program the radio with ALE (Automatic Link Establishment) parameters (frequencies, call signs, scan groups, sounding, etc.) and works in conjunction with ALE to automatically link with another station using the best channel available. Additionally, it incorporates ARQ (Automatic Repeat Request) and FEC (Forward Error Correction) protocols to ensure error-free data communications up to 9600 bps with the E110A modem.

DatronLINK is designed for use with Datron's E110A modem and 7000-series (RT7000, TW7000) radios with 7000WB1 and 7000ALE or 7000ALE-141B options. It can be used with Microsoft Outlook, Outlook Express and other POP/SMTP email clients. It runs on Microsoft Windows 2000 or Windows XP, Service Pack 2 or lower, and is supplied with a USB HASP security key. A serial port is required on the computer. Order part number DatronLINK-USB. For the RT7000, order cables C992369 and C992370 separately. For the TW7000, order cables C992370 and C992377 separately.

DatronLINK is offered as a core product with three optional modules. These options are Broadcast feature, Novell MHS support, and IBM Lotus Notes support.

DL-Broadcast is an option to the core DatronLINK product that allows simultaneous transmissions to different users. Contact your Datron Sales Representative for more details.

DL-MHS is an option to the core DatronLINK product that allows support for Novell networks. Contact your Datron Sales Representative for more details.

DL-NOTES is an option to the core DatronLINK product that allows support for IBM Lotus Notes networks. Contact your Datron Sales Representative for more details.

Product Configuration:

The core DatronLINK product part number is DatronLINK-USB. If the core product and any of the options are required at the time of the purchase of DatronLINK, then specify the following part numbers as required:

- DatronLINK-USB
- DL-Broadcast
- DL-MHS
- DL-Notes

For systems on a Novell network only, order DL-MHS. For systems on an IBM Lotus Notes network only, order DL-Notes. For systems that use both a Novell network and an IBM Lotus Notes network, order DL-MHS for systems on the Novell Network and DL-MHS and DL-Notes for systems on the IBM Lotus Notes network.

If the customer already has the core DatronLINK product and wants to order any of the options afterwards, then specify the following part number:

- DatronLINK-Upgrade

And any of the following options:

- DL-Broadcast
- DL-MHS
- DL-Notes

For systems on a Novell network only, order DL-MHS. For systems on an IBM Lotus Notes network only, order DL-Notes. For systems that use both a Novell network and IBM Lotus Notes network, order DL-MHS for systems on the Novell Network and DL-MHS and DL-Notes for systems on the IBM Lotus Notes network.

Note: The Upgrade will only include the configured CD-ROM, the jewel case, and instructions. The customer will use his existing HASP license key.

RC2-NG

RC2-NG radio control software provides a fast and easy way to set radio operating parameters (mode, power, squelch, etc.) and ALE (Automatic Link Establishment) settings (frequencies, call signs, scan groups, sounding, etc.) with Datron radios (7000-series, PRC1099A). RC2-NG is user-friendly and provides the ability to initiate ALE Voice and Chat links. For the 7000-series radio, the 7000ALE or 7000ALE-141B option is required. For the PRC1099A radio the 1099ALE option is required. It runs on a standard desktop or notebook computer.

Order the required computer-to-radio interface cable separately as listed in the table below.

- Pentium-class processor with at least 128 MB of RAM
- Microsoft Windows 98SE, Microsoft Windows 2000 and Microsoft Windows XP.

Radio	Connector	Interface Cable
TW7000	Accessory 1	C991964
	Accessory 2	C991963
RT7000	Accessory 1	C991974
	Accessory 2	C992132
PRC1099A	Accessory	C992326