NL115

Ethernet Interface and CompactFlash® Module

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Campbell Scientific's NL115 enables 10baseT Ethernet communications and stores data on a removable CompactFlash® card. This small, rugged communication device connects to the 40-pin peripheral port on a CR1000 or CR3000 datalogger.

Ethernet Communications

The NL115 allows the datalogger to communicate over a local network or a dedicated Internet connection via TCP/IP. A 10baseT Ethernet straight through cable is used when the cable is run from a hub to the NL115. A 10baseT Ethernet crossover cable is used if the cable is run directly from the computer to the NL115. For cable lengths longer than 9 ft, the 10baseT Ethernet cable must be shielded.

The NL115 is set up using the Device Configuration utility (DevConfig). DevConfig is bundled with our PC400, RTDAQ, and LoggerNet software and can also be downloaded, at no charge, from: www.campbellsci.com/downloads

Data Storage on CompactFlash Cards

CF Cards[1]

One Type I or Type II CompactFlash (CF) card fits into the NL115's card slot. Campbell Scientific offers and recommends CF cards manufactured by Silicon Systems. Silicon Systems cards are industrial-grade and have passed our ESD testing. Only industrial-grade CF cards with a storage capacity of 2 Gbytes or less should be used with our products.

Data Retrieval

The NL115/CF card combination can be used to expand the datalogger's memory, transport data/programs from the field site(s) to the office, upload power up functions, and store JPEG images of the CC640 digital camera. On the computer side, the CompactFlash® cards can be read by the computer's PCMCIA slot fitted with a CF1 CompactFlash adapter or by a USB port using a 17752 USB CompactFlash reader/writer.

Ordering Information

Ethernet Interface and CompactFlash® Module	
NL115	Ethernet Interface and CompactFlash Module for CR1000 or CR3000 dataloggers.

Temperature Range Options (choose one)	
-ST	Tested -25° to +50°C
-XT	Tested -40° to +85°C

Ethernet Cables	
13658	10baseT Ethernet straight through cable (7 ft). Recommended when the cable is run from a hub.
13659	10baseT Ethernet crossover cable (7 ft). Recommended if the cable is run directly from the computer..

CompactFlash Cards	
CFMC256M	256 Mbyte Industrial-grade Compact- Flash Memory Card manufactured by Silicon Systems
CFMC1G	1 Gbyte Industrial-grade Compact- Flash Memory Card manufactured by Silicon Systems
CFMC2G	2 Gbyte Industrial-grade Compact- Flash Memory Card manufactured by Silicon Systems

Reader/Writer or Adapter	
17752	USB 2.0 Reader/Writer for Memory Cards
CF1	SanDisk® CompactFlash Adapter for PCMCIA Slots

[1]*Only industrial-grade CF cards with a storage capacity of 2 Gbytes or less should be used with our products. For more information about CompactFlash cards, refer to www..campbellsci.com/documents/apnotes/pc_cf_cards.pdf*

Specifications

CE Compliant Devices: NL115, 17752 USB Reader/Writer

NL115

Power Requirements: 12 V supplied through the datalogger's peripheral port

Current Drain: 20 mA (CR1000 w/NL115 communicating over Ethernet)
43 mA (CR1000 w/NL115 communicating over Ethernet and accessing CF-card)

Temperature Range
- **Standard:** -25° to +50°C
- **Extended:** -40° to +85°C

EMI and ESD Protection: Meets requirements for a class A device under European Standards

Application of Council Directive(s): 89/336/EEC as amended by 89/336/EEC and 93/68/EEC

Standards to which Conformity is Declared: EN55022-1; 1995 and EN50082-1: 1992

Typical Access Speed[2]: 200 to 400 kbits s^{-1}

Memory Configuration: User selectable; ring (default) or fill-and-stop

Datalogger Operating System (OS)
- **CR1000:** Version OS9 or later
- **CR3000:** All CR3000 OSs

Software Requirements
- **LoggerNet:** Version 3.2 or later
- **PC400:** Version 1.3 or later
- **DevConfig:** Version 1.5 or later

Cable Requirements: Ethernet cable must be shielded if the length is greater than 9 ft .

CF Card Requirements: Industrial-grade; Storage capacity of 2 Gbytes or less

Dimensions: 4.0-in x 3.3-in x 2.6-in (10.0-cm x 8.3-cm x 6.5-cm)

Weight: 5.4 oz (154 g)

CFMC256M, CFMC1G, and CFMC2G

Manufacturer: Silicon Systems

Card Description: Industrial-grade CF cards that passed Campbell Scientific's ESD testing

Storage Capacity: 256 Mbyte, 1 Gbyte, or 2 Gbyte

Temperature Range: -40° to +85°C

Card Format: FAT32

CF1 Adapter

Manufacturer: Sandisk

Dimensions: 3.4 x 2.1 x 0.2 in (8.6 x 5.4 x 0.5cm)

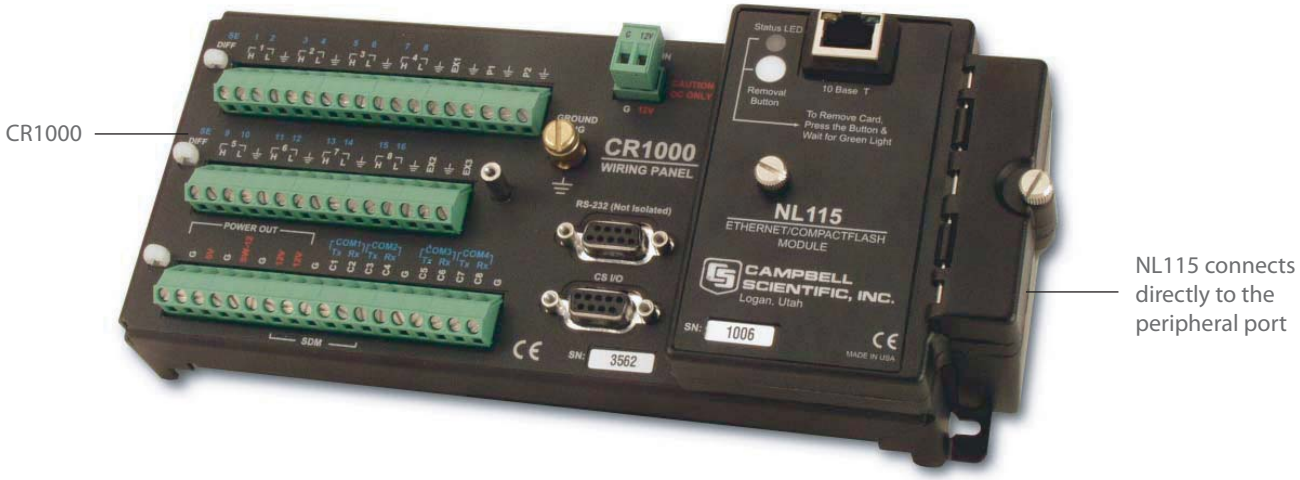
17752 USB Reader/Writer

Minimum Computer Requirements
- **Windows:** Vista, XP (SP1, SP2), 2000 (SP4)
- **MAC:** OS X v. 10.3.x+
- **USB Port:** USB 2.0

Dimensions: 3.5-in x 2.7-in x 0.75-in (8.9-cm x 6.9-cm x 1.9-cm)

Weight: 3.6 oz (102 g)

[2]*Typical Access Speed varies between dataloggers.*



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