

NL115

Ethernet Interface and CompactFlash® Module



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 Cards¹

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, and store JPEG images when the CC640 digital camera is connected to the datalogger. You can retrieve data stored on the card through a communications link with the datalogger or by removing the card and carrying it to a computer. The computer can read the CF card either with the computer's PCMCIA slot and the CF1 adapter or the computer's USB port and the 17752 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

¹Only 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	Cable Requirements:	Ethernet cable must be shielded if the length is greater than 9 ft.
<i>NL115</i>			
Power Requirements:	12 V supplied through the datalogger's peripheral port	CF Card Requirements:	Industrial-grade; Storage capacity of 2 Gbytes or less
Current Drain:	20 mA (CR1000 w/NL115 communicating over Ethernet) 43 mA (CR1000 w/NL115 communicating over Ethernet and accessing CF-card)	Dimensions:	4.0-in x 3.3-in x 2.6-in (10.0-cm x 8.3-cm x 6.5-cm)
Temperature Range		Weight:	5.4 oz (154 g)
Standard:	-25° to +50°C	<i>CFMC256M, CFMC1G, and CFMC2G</i>	
Extended:	-40° to +85°C	Manufacturer:	Silicon Systems
EMI and ESD Protection:	Meets requirements for a class A device under European Standards	Card Description:	Industrial-grade CF cards that passed Campbell Scientific's ESD testing
Application of Council Directive(s):	89/336/EEC as amended by 89/336/EEC and 93/68/EEC	Storage Capacity:	256 Mbyte, 1 Gbyte, or 2 Gbyte
Standards to which Conformity is Declared:	EN55022-1; 1995 and EN50082-1: 1992	Temperature Range:	-40° to +85°C
Typical Access Speed:	200 to 400 kbytes s ⁻¹	Card Format:	FAT32
Memory Configuration:	User selectable; ring (default) or fill-and-stop	<i>CF1 Adapter</i>	
Datalogger Operating System (OS)		Dimensions:	3.4-in x 2.1-in x 0.2-in (8.6-cm x 5.4-cm x 0.5-cm)
CR1000:	Version OS9 or later	<i>17752 USB Reader/Writer</i>	
CR3000:	All CR3000 OSs	Minimum Computer Requirements	
Software Requirements		Windows:	Vista, XP (SP1, SP2), 2000 (SP4)
LoggerNet:	Version 3.2 or later	MAC:	OS X v. 10.3.x+
PC400:	Version 1.3 or later	USB Port:	USB 2.0
DevConfig:	Version 1.5 or later	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)

