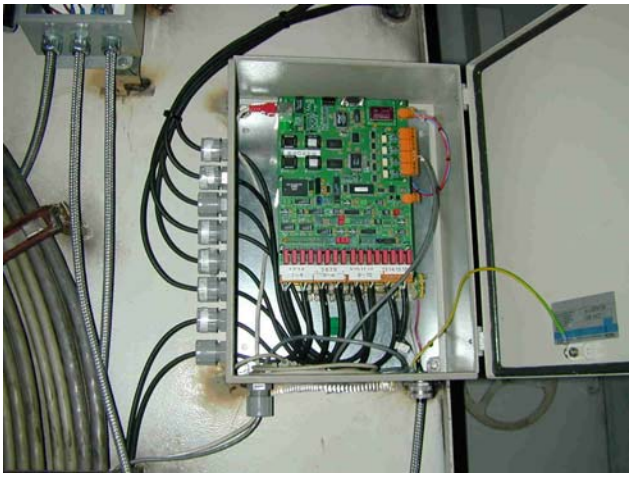
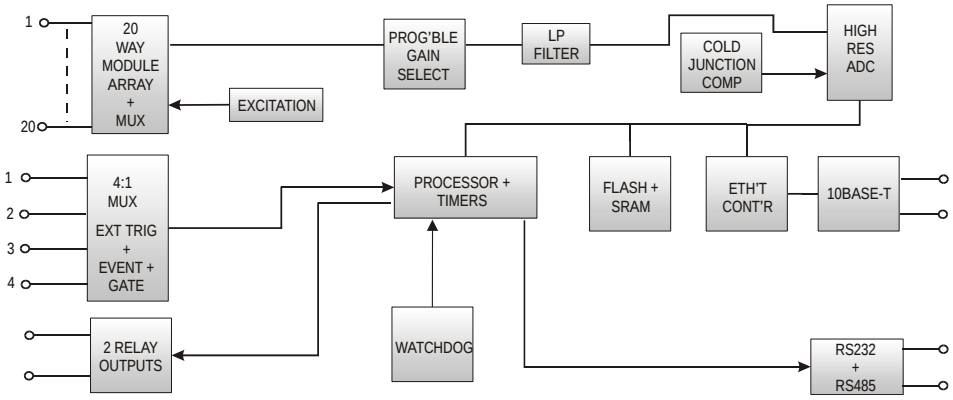
IMPACT / GUARDIAN "On-Line" Monitoring System

ITA-3 20-Channel Ethernet Data Acquisition Node

FEATURES

- 20 Differential Input Channels
- Wide Dynamic Range
- Automatic 50/60Hz Rejection
- 1000Vrms Isolation
- Isolated Relay Outputs
- Flexible Trigger/Tacho Functions
- 10BaseT Ethernet Interface





GENERAL DESCRIPTION

The ITA-3 is a 20-channel ethernet acquisition node designed for the measurement of process parameters such as temperatures, pressures, etc. The Node has several features to improve measurement accuracy in noisy environments. These include differential inputs, high common mode rejection, automatic 50/60Hz mains rejection, and an isolated input section. Both voltage and 4-20mA inputs can be accommodated, either connected directly, or from a range of standard DIN rail mounting signal conditioners. Cold junction compensation is also incorporated for use with uncompensated thermocouples.

Flexible trigger and tachometer functions are available, enabling pre and post trigger analysis to be performed. Gated acquisition is available ensuring that readings are taken only when a machine is running. Two isolated relay outputs are provided for external warnings or machine trips.

The node communicates via a standard 10BaseT ethernet interface. It comes in an optional IP66/NEMA4X enclosure with power supply.

ICON RESEARCH

IMPACT ENGINEERING INC

ITA-3 20-Channel Ethernet Data Acquisition Node

TECHNICAL SPECIFICATIONS

ANALOG INPUTS

No. of Channels:	20
Input Ranges:	0-10Vdc differential, 0-20mA or 4-20mA (settable)
Cold Junction Compensation:	Inbuilt (programmable on or off)
Input Sensitivity Range:	144dB
Filtering:	Automatic 50/60Hz rejection (programmable)
Common Mode Rejection:	90dB typical
Channel Crosstalk:	-100dB typical
DC Offset Removal:	Automatic
Channel Scan Rate:	2Hz
Isolation:	100Vrms
Accuracy:	±1% typical
Acquisition Modes:	Mode 1 – Data on demand Mode 2 – Data ready flag Mode 3 – Data broadcast

TRIGGERS

No. of Channels:	4
Coupling:	5-24 Vdc, isolated or non-isolated
Tacho Speed Range:	0.01Hz-10kHz using once-per-rev (divide-by-N up to 255 available)
Trigger Delays:	Pre-trigger delay up to 16384 and post-trigger up to 32768 samples
Event Trigger:	2 trigger inputs can be used as event inputs to synchronise sampling
Gated Acquisition:	2 trigger inputs can be used to enable and disable sampling

PROCESSING

ADC:	24-bit Sigma-Delta
Watchdog:	Automatic recovery on power interruption or similar

OUTPUTS

Relay:	2 isolated solid state relay outputs, rated at 240V, 1A
Status:	4 LED's indicate system communication status
Interface Port:	RS232, 9600 baud for communication and diagnostics

STORAGE

Memory Buffer:	0.5 Mbyte free space

MECHANICAL

Protection:	NEMA 4X, IP66
Enclosure:	Powder coated mild steel standard, or stainless steel optional
Node Dimensions:	400 mm x 300 mm x 155 mm

ENVIRONMENTAL

Temperature:	-20° C to 60° C

POWER

Power Supply:	24Vdc, or 100-240Vac power supply (optional)
Power Consumption:	150mA when supplied from 24Vdc

COMMUNICATIONS

Network:	Ethernet
Medium:	10Base-T
Cable:	CAT5 recommended
Connectors:	Weidmuller terminal connectors
Speed:	10 Mbits/sec
Isolation:	1000 Vrms

Specification subject to change without notice

Certified Installer / Service Specialist:
IMPACT Engineering Inc
6716 Eastside Drive NE, Suite 6
Tacoma, WA
USA

Tel: (253) 942-9000
Fax: (253) 942-9009
www.impactengineering.com

Manufactured By:
Icon Research Ltd
3 Raw Holdings
East Calder
West Lothian
EH53 0HY UK

Tel: +44 (0)1506 885000
Fax: +44 (0)1506 885501