



NOX ONE G3 Control Unit Rev.B



Fig. 1: 401-G3 NOX ONE



Fig. 2: 401-G3 NOX ONE



Fig. 3: N412-G3 NOX ONE Systemboard with



N403 CPU Module NOX ONE (DIMM VF50)
4: N403 CPU Module NOX ONE (DIMM VF50)

Fig.



Fig. 5: N405 Power supply

Overview

NOX ONE offers you 8 integrated resistance supervised inputs, 8 open collector outputs and 2 relay outputs and an additional tamper input.

Standards								
EN 50131 G3	EN 50130-4	EN 50130-5	EN 61000-6-3	EN 62368-1	VSO Kl. GS-H	ECCN 5A882	ECCN 5D992	SSF 1014 Ed.5

With integrated power supply and space for 1 x 17Ah battery.

Technical data

	Unit	Min.	Nominal	Max.
Operating temperature range	°C	0	25	40
Air humidity at +40°C (non condensing)	% rF			93
Dimensions housing (L x W x H)	mm	240 x 101 x 380		
Weight (with cover, without batteries)	kg	3.4		
Tamper protection	Integrated using optical sensor			
Back tamper protection	Integrated by switch connected to TAMP clamps			

CPU Module NOX ONE (DIMM VF50)	
Type	Toradex VF50
CPU core	ARM Cortex A5 with 400 MHz
RAM	128 MB
Flash	128 MB
Ethernet	1 x Integrated, 2nd Ethernet by extension board (optional)
USB	Integrated for firmware upgrades (Windows CE core)

Power supply	Unit	Min.	Nominal	Max.
AC supply voltage	VAC	100	230	240
AC supply frequency	Hz	47	50	63
Power consumption	VA			100
Output voltage	VDC	15.1	15.5	15.9
Output current (CPU and bus)	A			1.5
Output current for external components (P1 + P2 + P3 + P4)	A			1.3
Total current (CPU + detectors + NOX Bus) at 60 hours battery runtime	mA			200
Total current (CPU + detectors + NOX Bus) at 30 hours battery runtime	mA			400
Power consumption NOX ONE without load	mA		80	
Battery charge current	A		1.9	2.0
Battery low voltage protection	V	< 10.5		
Space for battery	1 x 17 Ah, Valve Regulated Lead Acid battery (VRLA type, VdS approved)			

Real time clock	Unit	Min.	Nominal	Max.
Precision				4 min. / year
Backup time at power fail	h	8		

Inputs (terminal P1 + P2)	Unit	Min.	Nominal	Max.
Input resistance, recommended range, IN1 to IN4	kΩ	3.5	12	50
Input resistance, absolute max. range, IN1 to IN 4	kΩ	2		300
Cable length for any connection to terminal P1 / P2	m			30

Outputs (terminal P1 + P2)	Unit	Min.	Nominal	Max.
Open collector current (constant), OUT1 to OUT4	mA			350
Open collector peak current, OUT1 to OUT4 (up to 1 second)	mA			500
Contact rating per relay at 40°C, pulsing (both relays active)	max. 30VDC / 1A ¹⁾			
Contact rating per relay at 40°C, constant (both relays active)	max. 30VDC / 0.6A			

Outputs (terminal P1 + P2)	Unit	Min.	Nominal	Max.
Contact rating per relay at 40°C, peak (up to 10 ms)		max. 30VDC / 3A		
Contact rating per relay at 40°C, peak (up to 5 min)		max. 30VDC / 1A		
Contact on resistance	Ω			1

Status LEDs	Color	Description
LED 1, power	green	On = Power Ok Blinks at general system fault (5 VDC missing, NOX Bus fuse error, over current)
LED 2, mains failure	yellow	On = when mains power is lost
LED 3, battery error	yellow	On = when battery is missing, overcharged or fuse error

Supply / Output	Fuse	Type	Description
P1 Pin 1, P1 Pin 6	F4 PTC 500 mA	automatic resetable	+15V Pins
P2 Pin 1, P2 Pin 6	F5 PTC 500 mA	automatic resetable	+15V Pins
P3 Pin 1	F2 PTC 1.5 A	automatic resetable	+15V Pin (same than NOX BUS)
P4 Pin 1	F2 PTC 1.5 A	automatic resetable	NOX BUS (supervised)
REL1 Protection	F6 PTC 1.1 A	automatic resetable	REL1 relay protection for overcurrent
REL2 Protection	F7 PTC 1.1 A	automatic resetable	REL2 relay protection for overcurrent
P9 USB	F1 PTC 200 mA	automatic resetable	USB connector
Battery cable	ATO 10AT	Melting fuse	Battery cable (supervised, changeable)

Extension sockets	Description
P10	Future extension for 2nd Ethernet interface

Terminal P1	+15V	IN1	OUT1	IN2	OUT2	+15V	IN3	OUT3	IN4	OUT4
Description	15V Out	Input 1	Output 1	Input 2	Output 2	15V Out	Input 3	Output 3	Input 4	Output 4

Terminal P2	+15V	IN5	OUT5	IN6	OUT6	+15V	IN7	OUT7	IN8	OUT8
Description	15V Out	Input 5	Output 5	Input 6	Output 6	15V Out	Input 7	Output 7	Input 8	Output 8

Terminal P3	+15V	GND	TAMP	TAMP	NO	COM	NC	NO	COM	NC
Description	15V Out	GND Out	Tamper contact input		Relay 1		Relay 2			

Terminal P4	+	-	A	B
Description	Supply Voltage (VBUS)		NOX Bus Connection	

Terminal P5	+	-
Description	DC Input from power supply	

Terminal P6	+	-
Description	12V Battery connection	

Terminal P7	Ethernet 10/100
Description	TCP/IP Network connection

Terminal P8	CPU
Description	CPU module

Terminal P9	USB
Description	for Firmware Updates only

Terminal P10	Extension #2
Description	for 2nd Ethernet interface

Terminal P11	Extension #1
Description	not used

Logged data

All data below is logged for 7 days in 5 minute intervals. Thereafter the average is stored for 365 days.

Parameter	Description
Battery voltage	Voltage at the battery connector clamp (mains and battery operation)
Battery current	Battery charge current
Bus voltage	NOX BUS output voltage
Total output current	Output current (includes internal used supply)
Temperature	Board temperature

Detected errors

All important system parameters are supervised and an alarm is generated if a failure is detected. The table below lists all failures detected.

Failure	Description	Alarm type (default)
Mains failure	Detection of mains power failure without delay	Warning
Mains failure delayed	Detection of mains power failure with delay (default 30 Min)	System failure
Battery failure	No battery connected or damaged battery detected	System failure
General error	Internal system failure (Loss of 5V supply)	System failure
Total current too high	Output current > 1.5A	Warning
NOX Bus supply	Fuse failure NOX Bus	Warning *1

*1 The fuse failure will lead to a loss of all connected devices on the NOX Bus consequently sabotage alarms are generated.

Software functions	Supported
NoxConfig (configuration / maintenance)	yes
PC Control Panel	yes
NOX TPA / NOX PC TPA	no
SIMS	yes with extra license
3rd party integration using ActiveX control	yes with extra license
RestAPI and Cloud Events	yes >= R9 with extra license
iNOX	yes
iNOX floorplans	yes with extra license
NOX for Android	yes
Master/Slave systems	only as slave CPU
SIA IP incl. AES encryption	yes
Dual path alarm transmission according to EN 50136	yes >= R9 with extra license
NTP time synchronisation	yes
Simons Voss Smart Intego integration	yes
Simons Voss VCN / Salto offline door	yes >= R9 with extra license
NOX TIO with Ethernet communication	yes
NOX units connection on NOX BUS (except gateway units)	yes
CEI ABI alarming protocol	yes
Paradox wireless receiver	yes
EMAIL (smtp)	yes
Modbus IP server	System R7: no System R8: yes (max. 40 requests / second)
Modbus IP client	no
SSH (secure shell)	no
Redundant CPUs	no
SNMP	no
VdS 2464 IP	no
Southwest Microwave integration	no
IP Busses	no
NOX Bus gateway units	no
Acter / Glutz	no

Software functions	Supported
Picture Detector PMX V2	no

Software limitations	Number
Bus units	127
Areas	100
Users	1'000 ²⁾
User profiles	20
Time profiles	50
Log entries	10'000

Ordering Information

Art.-No. **N401-G3; NOX ONE G3, Control unit with 1 Bus**

consists of:

- N406 NOX ONE Box empty
- N412-G3 NOX ONE NX1 System board (without CPU module)
- N403 CPU module NOX ONE (DIMM VF50) with "ONE" licence
- N405 NOX ONE power supply 15.5VDC/50W

Art.-No. **N402; NOXone Set, Control unit with Control Panel**

consists of:

- N401-G3 NOX ONE G3, Control unit with 1 Bus
- N267-G3 NOX CPA G3, Control Panel

Art.-No. **N414; NOX ETH, 2nd Ethernet interface**

Manufacturer Contact

NOX Systems AG

Kanalstrasse 18
9490 Vaduz
Liechtenstein

T: +423 370 25 25

E: info@noxsystems.com

www.noxsystems.com

NOX ONE G3, Datasheet V1.2 en, Copyright© 2022, NOX Systems AG

¹⁾

at a duty cycle of 33% at 0.1 Hz (e.g. 3 seconds on, 6 seconds off)

²⁾

If the number of users is exceeded, only the maximum number of users is loaded in the central. This also applies to master/slave systems and SIMS code management.

From:

<https://partner.noxsystems.com/noxwiki/> - **NOX Wiki**

Permanent link:

<https://partner.noxsystems.com/noxwiki/doku.php?id=en:01datasheets:01cu:noxdatasheetnoxonerevb>

Last update: **22.Nov 2024**

