



Status: **Official**

Doc. No.: **S1A5907611** Revision: **03**

Firmware Release Notes

M340 BMXNOE0100 EXEC V2.70

Affected Product (s)	Prior Version (s)	New Version (s)	Date
BMXNOE0100	V2.60	V2.70	Jan 3, 2013
BMXNOE0100	V2.30	V2.60	June 29, 2012
BMXNOE0100	V2.20	V2.30	June 24, 2011
BMXNOE0100	V2.01	V2.20	Dec. 22, 2010
BMXNOE0100	V2.00	V2.01	

	Role	Name	Date
Author:	Level 3	Mike Kelly	01/03/13
Reviewed by:	Level 3 Manager	John Hill	01/03/13
Approved by:	Level 3 Manager Network Director	John Hill Martyn Jones	01/03/13

Table of Contents

<u>BNOE0100 VERSION 2.70 RELEASE NOTES</u>	4
1 ETHERNET PORT BECOMES NON-RESPONSIVE AFTER REPEATED LINK UP/DOWN EVENTS	4
1.1 Issue	4
1.2 Resolution	4
1.3 Customer action	4
<u>BNOE0100 VERSION 2.60 RELEASE NOTES</u>	5
2 THE WEB PAGE ALLOWED USER TO ENTER MORE THAN 16 CHARACTERS AS A PASSWORD BUT ONLY 16 WERE USED.	5
2.1 Issue	5
2.2 Resolution	5
2.3 Customer action	5
3 ENHANCEMENT - INCREASE TTL TO 32 FOR ALL ETHERNET PRODUCTS	5
3.1 Issue	5
3.2 Resolution	5
3.3 Customer action	5
4 CHANGING PAGES VERY QUICKLY CAUSES AN EXCEPTION ERROR GETTING RETURNED.	6
4.1 Issue	6
4.2 Resolution	6
4.3 Customer action	6
5 THE TIME BETWEEN READ_VAR QUERIES INCREASES OVER TIME IF 1 OR 2 OF UNRELATED DEVICES ARE DISCONNECTED	6
5.1 Issue	6
5.2 Resolution	6
5.3 Customer action	6
6 SECURITY ISSUES WITH THIS DEVICE	7
6.1 Issue	7
6.2 Resolution	7
6.3 Customer action	7
<u>BNOE0100 Version 2.30 Release Notes</u>	8
7 DHCP SERVER DOES NOT SUPPORT DHCP 'ROOT PATH ' OPTION 17 (20045626*V2.30)	8
7.1 Issue DHCP Server does not provide Option 17 in the OFFER when it is included in the DISCOVER or REQUEST PDU's	8
7.2 Resolution	8
7.3 Customer action	8
8 BMXNOE0100 MAY NOT RESPOND TO A SYN IF BOTH BMXNOE AND XBT ARE POWERED ON AT SAME TIME (20046585*V2.30)	8
8.1 Issue	8
8.2 Resolution	8
8.3 Customer action	8
9 BMXNOE0100 FAILS TO RECOVER FROM A SERIAL DISCONNECTION THROUGH A SERIAL/ETHERNET GATEWAY (20047307*V2.30)	9
9.1 Issue	9
9.2 Resolution	9
9.3 Customer action	9
<u>BNOE0100 Version 2.20 Release Notes</u>	10
10 THE BMXNOE0100 MAY STOP FUNCTIONING AS A DHCP SERVER (20046628*V2.20)	10
10.1 Issue	10
10.2 Resolution	10
10.3 Customer action	10
<u>BNOE0100 VERSION 2.01 RELEASE NOTES</u>	11

11	THE BMXNOE0100 FDR SERVER WILL NOT RESTORE THE 'DEVICE PARAMETER FILE' (.PRM) TO THE DEVICE (20045819*V2.01)	11
11.1	Issue	11
11.2	Resolution	11
11.3	Customer action	11
12	ALL READ_VAR AND WRITE_VAR COMMS WILL STOP IF A SINGLE DEVICE IS DISCONNECTED FOR A LONG PERIOD OF TIME (20045201*V2.01)	11
12.1	Issue	11
12.2	Resolution	11
12.3	Customer action	11
13	BOOTP DOES NOT WORK IF THE GATEWAY ADDRESS IS NOT ON THE SAME SUBNET (20044849*V2.01)	12
13.1	Issue	12
13.2	Resolution	12
13.3	Customer action	12
14	ENHANCEMENT – WEB ACCESS FOR 'NTP DIAGNOSTICS' (20044730*V2.01)	12
14.1	Issue	12
14.2	Resolution	12
14.3	Customer action	12
15	UPGRADE INSTRUCTIONS	13
15.1	Upgrade the firmware using the Unity Loader Utility.	13

BNOE0100 VERSION 2.70 RELEASE NOTES

1 ETHERNET PORT BECOMES NON-RESPONSIVE AFTER REPEATED LINK UP/DOWN EVENTS

1.1 Issue

Ethernet Port Becomes Non-responsive after repeated Link Up/Down events, when it is getting its IP address through a DHCP request.

1.2 Resolution

There were problems with task priority handling in the DHCP. The task priorities were corrected and the link now becomes reestablished after all link-down/link-up events.

1.3 Customer action

Upgrade the BNOE0110 firmware.

BNOE0100 VERSION 2.60 RELEASE NOTES

2 THE WEB PAGE ALLOWED USER TO ENTER MORE THAN 16 CHARACTERS AS A PASSWORD BUT ONLY 16 WERE USED.

2.1 Issue

If the user entered a new password as 17 characters in the http password web page, the NOE returned a page saying that the password change was successful. When the user tried use the new password, it failed.

2.2 Resolution

The password field was corrected to limit the user to 16 characters and no more will be accepted.

2.3 Customer action

Update the BMXNOE0100 firmware.

3 ENHANCEMENT - INCREASE TTL TO 32 FOR ALL ETHERNET PRODUCTS

3.1 Issue

A customer requested that the Time To Live be increased to 32 in order to accommodate larger number of hops.

3.2 Resolution

The TTL is now 32 for this Ethernet product.

3.3 Customer action

Update the BMXNOE0100 firmware.

4 CHANGING PAGES VERY QUICKLY CAUSES AN EXCEPTION ERROR GETTING RETURNED.

4.1 Issue

Incorrect function return from the stack combined with multiple timeout values resulted in loss of communication resources.

4.2 Resolution

Function call corrected and a single timeout replacing the previous ones cleared the problem.

4.3 Customer action

Update the BMXNOE0100 firmware.

5 THE TIME BETWEEN READ_VAR QUERIES INCREASES OVER TIME IF 1 OR 2 OF UNRELATED DEVICES ARE DISCONNECTED

5.1 Issue

The root cause of this is that the CPU has a time out as given by the application and the Ethernet Port has another time out as given by TCP stack for each transactions. There is also no way for the CPU to tell the Ethernet Port to abort or cancel a transaction. When the CPU's time out is shorter than the Ethernet Port's and the application resends message again the Ethernet Port transaction table fills up, and/or the socket's queue fills

5.2 Resolution

Improved handling of the Port 502 Client's send message.

5.3 Customer action

Update the BMXNOE0100 firmware.

6 SECURITY ISSUES WITH THIS DEVICE

6.1 Issue

Cyber Security required the following

- 1) Remove Telnet service
- 2) Remove Wind River debug service pt
- 3) Remove unused logins/passwords from firmwar.

6.2 Resolution

Removed Telnet service.

Removed Windriver debug port.

Removed unused password access points.

6.3 Customer action

Update the BMXNOE0100 firmware.

BNOE0100 Version 2.30 Release Notes

7 DHCP SERVER DOES NOT SUPPORT DHCP 'ROOT PATH ' OPTION 17 (20045626*V2.30)

7.1 Issue

DHCP Server does not provide Option 17 in the OFFER when it is included in the DISCOVER or REQUEST PDU's.

7.2 Resolution

The DHCP Server now provides the path data in all DHCP OFFERs. Option 17 is a parameter in the DHCP OFFER from the Server indicating the path of the .prm parameter file.

7.3 Customer action

Update the BMXNOE0100 firmware.

8 BMXNOE0100 MAY NOT RESPOND TO A SYN IF BOTH BMXNOE AND XBT ARE POWERED ON AT SAME TIME (20046585*V2.30)

8.1 Issue

A BMXNOE may not initially respond to a SYN from an XBT if both BMXNOE0100 and XBT are powered on at same time.

8.2 Resolution

SYN Requests are ignored until the BMXNOE0100 is completely booted.

8.3 Customer action

Update the BMXNOE0100 firmware.

9 BMXNOE0100 FAILS TO RECOVER FROM A SERIAL DISCONNECTION THROUGH A SERIAL/ETHERNET GATEWAY

(20047307*V2.30)

9.1 Issue

When a device is disconnected on the serial side of a gateway, the BMXNOE0100 will resend a Modbus message after 3 Keep-Alives causing the messaging to become out sync and not allowing further communication.

9.2 Resolution

Modified the retransmission mechanism to improve robustness against sync errors.

9.3 Customer action

Update the BMXNOE0100 firmware.

BNOE0100 Version 2.20 Release Notes

10 THE BMXNOE0100 MAY STOP FUNCTIONING AS A DHCP SERVER

(20046628*V2.20)

10.1 Issue

If the device being IO scanned has a slow response time (110-120ms), then the IO scanner will not be able to open a connection.

10.2 Resolution

The Round Trip time algorithm for retransmission was corrected.

10.3 Customer action

Update the BNOE0100 firmware.

BNOE0100 VERSION 2.01 RELEASE NOTES

11 THE BMXNOE0100 FDR SERVER WILL NOT RESTORE THE 'DEVICE PARAMETER FILE' (.PRM) TO THE DEVICE (20045819*V2.01)

11.1 Issue

A restore operation will not load the 'Device Parameter File' from the FDR server.

The BNOE server did not properly store the device parameter file used for FDR services. This resulted in the Restore operation not working correctly.

11.2 Resolution

Exec firmware changes were implemented that correctly stores the device parameter file in the BMXNOE0100 non volatile memory.

11.3 Customer action

Update the BNOE0100 firmware.

12 ALL READ_VAR AND WRITE_VAR COMMS WILL STOP IF A SINGLE DEVICE IS DISCONNECTED FOR A LONG PERIOD OF TIME (20045201*V2.01)

12.1 Issue

If a number of READ_VAR and WRITE_VAR function blocks are connected to different devices and one is disconnected, all of the other devices will stop communicating after a period of time (up to 36 hours).

12.2 Resolution

Semi-open connections are now handled properly when another connection is opened to the same address.

12.3 Customer action

Update the BNOE0100 firmware.

13 BOOTP DOES NOT WORK IF THE GATEWAY ADDRESS IS NOT ON THE SAME SUBNET (20044849*V2.01)

13.1 Issue

Bootp does not work if the Gateway address is not on the same subnet as the IP address. It will work if the gateway address is 0.0.0.0 or on the same subnet.

13.2 Resolution

Fields in the bootp response are now cleared properly.

13.3 Customer action

Update the BNOE0100 firmware.

14 ENHANCEMENT – WEB ACCESS FOR ‘NTP DIAGNOSTICS’ (20044730*V2.01)

14.1 Issue

Enhancement feature.

14.2 Resolution

Ability to access the NTP diagnostics through the BMXNOE0100 web pages.

NTP Status		
Status	Idle	

NTP Server Status		
Linked to NTP server	☐	Server address 0.0.0.0 Server Secondary

NTP Request Statistic		
NTP requests	0	NTP errors 0
NTP responses	0	Last error 4

NTP Date and Time		
Date	Unknown	Time Unknown DST status ON
Time zone (GMT)Greenwich Mean Time[Dublin Edinburgh Lisbon London]		

14.3 Customer action

This Enhancement is part of Exec version 2.01 and web page v4.50.

15 UPGRADE INSTRUCTIONS

15.1 Upgrade the firmware using the Unity Loader Utility.

The attached [Unity Pro Unity Loader User Manual](#) explains the firmware upgrade procedure.



UnityLoader
4-2009.pdf