

INSIGHTqc – without and with internal DIO

INTRODUCTION

This is the software release notes for versions 200.0.0.61/400.0.3.14 for INSIGHTqc (without/with internal DIO) Corded Controllers. This document details the software version, tool versions supported, new features, enhancements & upgrade instructions for this release.

1. Release Information

The following software releases are launched as part of this release package.

Please upgrade both the Controller Application and MCE with the latest versions as outlined in this section.

CONTROLLER VERSION		
Description	INSIGHTqc without IO	INSIGHTqc with IO
Application Version	200.0.0.61	400.0.3.14
Database Version	0.0.1	0.0.1
OS Version	0.0.1	0.0.1
MCE	001.003.012	002.003.012
EthernetIP stack version	2.80	2.80
Profinet stack version	2.20.1	2.20.1

2. New Features:

- **IRB Reliable Firmware Updates:** Firmware updates for IRB and MCE are now more robust, featuring a clear progress bar for improved visibility and confidence during the update process

3. Enhancements and Fixes

- **Tool Locking Issue Resolved:** Eliminated tool locking errors that previously occurred during the final or last step of operations.
- **I/O Output Stability:** Resolved the issue where outputs such as Pass Cycle, Complete Cycle, and Fail Cycle were not cleared correctly during in-cycle operations.
- **PFOP Connectivity Improvements:** Addressed PFOP client reconnection failures and resolved duplicate End-of-Run (EOR) occurrences.
- **Powerhead Output Correction:** Fixed the issue where the powerhead continued to show in-cycle output after receiving a pre-run error from the controller.

4. Known Issues:

- **Cycle Result Download:** Occasional failures may occur when downloading cycle results, which can lead to empty data on the USB stick.

5. Upgrade Instructions

5.1 Controller Firmware Update

If updating from QCD Controller to Multi-Spindle platform - See link:

[Updating a QCD Controller to the Multi-Spindle Platform \(Powerhead or Single Spindle\) – IRToolHelp](#)

Please follow the instruction below to download the firmware file.

- Go to our SendSafely/FTP and copy the Application (.irb) file to your PC or USB drive.

IR Secure Data Transfer System (Send Safely):

Link to platform for collaborators –

<https://filesafe.ingersollrand.com/receive/?packageCode=R0xH0I3CZTge7FOI2JUtkroDyiqJLwxfULry0BLVYno#keycode=AFFzeIR6NhkhOTThScIWRyjOe9J-2x9fbcDhTjLCgkk>

Path to firmware file/s -

1. Home / INSIGHTqc- Corded Controller Firmware / QCD Integrated IO / Version 400.0.3.14
2. Home / INSIGHTqc- Corded Controller Firmware / QCD Multi / Version 200.0.0.61

6. MID List

6.1 PFOP MID SUPPORTED

MID	Description	QCD_Multi Standalone	QCD_Multi Powerhead	MID	Description	QCD_Multi Standalone	QCD_Multi Powerhead
1	Communication start	Yes	Yes	54	Vehicle Id Number upload unsubscribe	Yes	Yes
2	Communication start acknowledge	Yes	Yes	60	Last tightening result data subscribe	Yes	Yes
3	Communication stop	Yes	Yes	62	Last tightening result data acknowledge	Yes	Yes
4	Command error	Yes	Yes	63	Last tightening result data unsubscribe	Yes	Yes
5	Command accepted	Yes	Yes	64	Old tightening result upload request	Yes	Yes
8	Trace data Subscribe	Yes	Yes	65	Old tightening result reply	Yes	Yes
9	Trace data unsubscribe	Yes	Yes	70	Alarm subscribe	Yes	Yes
10	Parameter set numbers upload request	Yes	Yes	71	Alarm Upload	Yes	Yes
11	Parameter set numbers upload reply	Yes	Yes	72	Alarm Upload acknowledge	Yes	Yes
12	Parameter set data upload request	Yes	Yes	73	Alarm Unsubscribe	Yes	Yes
13	Parameter set data upload reply	Yes	Yes	74	Alarm Acknowledged on torque controller	Yes	Yes
14	Parameter set "selected" subscribe	Yes	Yes	75	Alarm Acknowledged Ack	Yes	Yes
15	Parameter set "selected"	Yes	Yes	76	Alarm Status	Yes	Yes
16	Parameter set "selected" acknowledge	Yes	Yes	77	Alarm Status acknowledge	Yes	Yes
17	Parameter set "selected" unsubscribe	Yes	Yes	78	Acknowledge alarm remotely on torque controller	Yes	Yes
18	Select Parameter set	Yes	Yes	80	Read time upload request	Yes	Yes
19	Set Parameter set batch size	Yes	Yes	81	Time upload reply	Yes	Yes
20	Reset Parameter set batch size	Yes	Yes	82	Set Time in the Torque Controller	Yes	Yes
30	Job numbers upload request	Yes	Yes	127	Abort job	Yes	Yes
31	Job numbers upload reply	Yes	Yes	128	Job batch increment	Yes	Yes
32	Job data upload request	Yes	Yes	129	Job batch decrement	Yes	Yes
33	Job data upload reply	Yes	Yes	130	Job off	Yes	Yes
34	Job "info" subscribe	Yes	Yes	200	Set "external controlled" relays	Yes	Yes
35	Job "info"	Yes	Yes	210	Status "external monitored inputs" subscribe	Yes	Yes
36	Job "info" acknowledge	Yes	Yes	211	Status "external monitored inputs" upload	Yes	Yes
37	Job "info" unsubscribe	Yes	Yes	212	Status "external monitored inputs" upload acknowledge	Yes	Yes
38	Select Job	Yes	Yes	213	Status "external monitored inputs" unsubscribe	Yes	Yes
39	Job restart	Yes	Yes	214	IO device status request	Yes	Yes
40	Tool data upload request	Yes	Yes	215	IO device status	Yes	Yes
41	Tool data upload reply	Yes	Yes	250	Selector socket info subscribe	Yes	NA
42	Disable tool	Yes	Yes	251	Selector socket info	Yes	NA
43	Enable tool	Yes	Yes	252	Selector socket info acknowledge	Yes	NA
44	Disconnect tool	Yes	NA	253	Selector socket info unsubscribe	Yes	NA
50	Vehicle Id Number download request	Yes	Yes	410	AutoDisable settings request	Yes	Yes
51	Vehicle Id Number upload subscribe	Yes	Yes	411	AutoDisable settings reply	Yes	Yes
52	Vehicle Id Number upload	Yes	Yes	900	Trace	Yes	Yes
53	Vehicle Id Number upload acknowledge	Yes	Yes	9999	Keep alive message	Yes	Yes

6.2 FOP MID SUPPORTED

MID	Description	QCD_Multi Standalone	QCD_Multi Powerhead	MID	Description	QCD_Multi Standalone	QCD_Multi Powerhead
MID 0001	Communication start	Yes	Yes	MID 0041	Tool data upload reply	Yes	Yes
MID 0002	Communication start acknowledge	Yes	Yes	MID 0042	Disable tool	Yes	Yes
MID 0003	Communication stop	Yes	Yes	MID 0043	Enable tool	Yes	Yes
MID 0004	Command error	Yes	Yes	MID 0050	Vehicle Id Number download request	Yes	Yes
MID 0005	Command accepted	Yes	Yes	MID 0051	Vehicle Id Number upload subscribe	Yes	Yes
MID 0006	(Master/Slave)Spindle Connection Status	NA	Yes	MID 0052	Vehicle Id Number	Yes	Yes
MID 0007	(Master/Slave)Spindle Connection Status Ack	NA	Yes	MID 0054	Vehicle Id Number upload unsubscribe	Yes	Yes
MID 0008	(Master/Slave)Spindle connect status Subscribe	NA	Yes	MID 0060	Last tightening result data subscribe	Yes	Yes
MID 0009	(Master/Slave)Spindle connect status Unsubscribe	NA	Yes	MID 0061	Last tightening result data upload reply	Yes	Yes
MID 0010	Parameter set number upload request	Yes	Yes	MID 0062	Last tightening result data acknowledge	Yes	Yes
MID 0011	Parameter set numbers upload reply	Yes	Yes	MID 0063	Last tightening result data unsubscribe	Yes	Yes
MID 0012	Parameter set data upload request	Yes	Yes	MID 0070	Alarm subscribe	Yes	Yes
MID 0013	Parameter set data upload reply	Yes	Yes	MID 0071	Alarm Upload reply	Yes	Yes
MID 0014	Parameter set "selected" subscribe	Yes	Yes	MID 0072	Alarm upload acknowledge	Yes	Yes
MID 0015	Parameter set selected	Yes	Yes	MID 0073	Alarm unsubscribe	Yes	Yes
MID 0016	Parameter set selected acknowledge	Yes	Yes	MID 0074	Alarm Acknowledged on Torque Controller	Yes	Yes
MID 0017	Parameter set "selected" unsubscribe	Yes	Yes	MID 0075	Alarm Acknowledged ACK	Yes	Yes
MID 0018	Select Parameter set	Yes	Yes	MID 0076	Alarm Status	Yes	Yes
MID 0019	Set Parameter Set batch size	Yes	Yes	MID 0077	Alarm Status Acknowledge	Yes	Yes
MID 0020	Reset Parameter Set batch size	Yes	Yes	MID 0080	Read time upload request	Yes	Yes
MID 0030	Job numbers upload request	Yes	Yes	MID 0081	Read time upload reply	Yes	Yes
MID 0031	Job numbers upload reply	Yes	Yes	MID 0082	Set Time in Torque Controller	Yes	Yes
MID 0034	Job info subscribe	Yes	Yes	MID 0100	Multi spindle result Subscribe	NA	Yes
MID 0035	Job info	Yes	Yes	MID 0101	Multi spindle result upload	NA	Yes
MID 0037	Job info unsubscribe	Yes	Yes	MID 0102	Multi spindle result upload acknowledged	NA	Yes
MID 0038	Select Job	Yes	Yes	MID 0410	Auto Disable settings request	Yes	Yes
MID 0039	Job restart	Yes	Yes	MID 0411	Auto Disable settings reply	Yes	Yes
MID 0040	Tool data upload request	Yes	Yes	MID 9999	Keep alive message	Yes	Yes

7. Revision History

Version	Date	Summary of Changes	Author
0.01	06/12/2025	Draft	Amol Kulkarni
0.02	08/12/2025	Final	Amol Kulkarni